

BEFORE THE  
POLLUTION CONTROL HEARINGS BOARD  
STATE OF WASHINGTON

IN THE MATTER OF  
JOHN ENDSLEY, et al.,

Appellants,

v.

STATE OF WASHINGTON,  
DEPARTMENT OF ECOLOGY, and  
MANCHESTER WATER DISTRICT,

Respondents.

PCHB No. 81-107

FINAL FINDINGS OF FACT,  
CONCLUSIONS OF LAW  
AND ORDER

This matter, the appeal of an order authorizing a permit for the appropriation of ground water came on for hearing before the Pollution Control Hearings Board, Nat W. Washington (presiding), Gayle Rothrock and David Akana, convened at Lacey, Washington on November 16, 1981. Appellants were represented by appellants John S. Endsley and John Dotson; respondent Department of Ecology was represented by Robert Mack, Assistant Attorney General; respondent Manchester Water District was not represented. Reporter Helen R. Allen recorded the proceedings.

Witnesses were sworn and testified. Exhibits were examined. From

1 the testimony heard and witnesses examined the Board makes these

2 FINDINGS OF FACT

3 I

4 Respondent Manchester Water District supplies domestic water to  
5 residents of the Manchester area of Kitsap County. Appellants are  
6 residents of the area who have their own wells and are not customers  
7 of the water district.

8 In this appeal, appellants, contend that the Department of Ecology  
9 (DOE) erred in ordering the issuance of a ground water permit to  
10 respondent water district pursuant to application G1-22472, claiming  
11 that the proposed appropriation will impair existing rights.

12 II

13 The application for permit No. G1-22472, the subject of this  
14 action, which was filed by the water district on March 27, 1975,  
15 relates to an existing well generally referred to as Manchester Water  
16 District Well No. 4 (hereinafter "Well 4"). At the time the  
17 application for permit No. G1-22472 was filed, well 4 was being  
18 operated by the water district under permit No. G1-20328P, which  
19 allowed 50 gallons per minute (gpm) with the quantity limited to 26.7  
20 acre feet per year. In October 31, 1975, this permit was superceded  
21 by Certificate No. G1-20328C.

22 The application for permit No. G1-22472 was for 150 gpm for a  
23 maximum of 8 hours per day. The new permit as it is to be issued,  
24 however, is for only 50 gpm, making a total of 100 gpm when combined  
25 with Certificate No. G1-20328C. The new permit will allow only 26.7

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1 acre feet per year for the combined permit and certificate and will  
2 allow pumping from well 4 under the combined permit and certificate  
3 for a maximum of only 4 hours per day.

### 4 III

5 Although respondent's existing certificate (G1-20328C) is for only  
6 50 gpm with a maximum of 26.7 acre feet per year, well 4 is now, and  
7 has for sometime been operating at 100 gpm for about 4 hours per day,  
8 but still within the maximum of 26.7 acre feet per year. Such  
9 operation is in violation of the terms of the certificate. The only  
10 reason given by respondent for this continuing violation is that the  
11 installed pump could not pump as efficiently at 50 gpm as it could at  
12 100 gpm.

### 13 IV

14 Of all the wells in the area of well 4, only two appear to be in  
15 any danger of being affected adversely to any substantial degree if  
16 well 4 continues to be operated at a maximum of 100 gpm for a maximum  
17 of 4 hours in each 24 hour day. These wells are the Leonard well  
18 which is located about 280 feet west of well 4 and the Stockwell well  
19 which is located about 900 feet northwest of well 4. The physical  
20 characteristics of well 4 and these two wells are:

21	<u>Well</u>	<u>Depth Below</u> <u>Surface</u>	<u>Depth Below Surface</u> <u>Of Static Water Level</u>	<u>Depth of Pump Intake</u> <u>Below Surface</u>
22	No. 4	257'	65-77'	189'
23	Leonard	173'	50-58'	90'
24	Stockwell	263'	80'	248'

25  
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V

Peter Grimstad, section head of the Water Investigation Division of the Department of Ecology, in April and October of 1973, conducted tests on the wells. In April well 4 was pumped for 24 hours at a rate of 280 gpm. As a result, the water level in the Leonard well dropped to 90 or more feet below ground level. This caused the water to drop below the pump intake. During this test the Stockwell well, which was much further away, was not monitored.

In October, Mr. Grimstad conducted an aquifer test on the Stockwell well. The well was pumped at the average rate of 5.5 gpm. This drew the water down to the pump intake, which was 248 below ground level and 168 feet below the static level. This indicates that a constant yield for that well would be only 3 to 4 gpm, and also indicates that any problems with the Stockwell well are only minimally attributable to well 4. While the Stockwell well was being pumped for about 21-1/2 hours the water level in well 4 was drawn down by 9 inches. From computations based on this drawdown in well 4, it was calculated that if well 4 were to be pumped at the rate of 200 gpm for 8 hours per day the level in the Stockwell well would be reduced about 9 feet, and that if continued for 100 days the level would be reduced between 22 and 26 feet with a possible maximum reduction of about 30 feet. A reduction of 30 feet would result in a 18% reduction in the available drawdown in the Stockwell well.

VI

Peter Grimstad conducted a second test for the Department of Ecology in 1977. The test conducted was a 24 hour aquifer test on

1 well 4, the Leonard well, the Stockwell well, the Ock well and an  
2 unused artesian well. The artesian well is 1/4 mile north of well 4.  
3 The Ock well is also north of well 4, but the distance was not shown  
4 in the report. The test was carried out on April 26 and 27, 1977.  
5 The test was performed with well 4 being pumped for 24 hours at an  
6 average rate of 94.34 gpm. At this rate of pumping, after 24 hours  
7 the water level in the Leonard well had declined 7.92 feet, the  
8 Stockwell had declined 8.93 feet and well 4 had declined 35.38 feet.  
9 There was no decline in the Ock well or the unused artesian well.

10 Mr. Grimstad, in arriving at his conclusions assumed that in  
11 actual operation, well 4 would be pumped at the rate of 200 gpm for 2  
12 hours and recover for 6 hours, which amounts to 6 hours pumping each  
13 24 hours with 18 hours of recovery. With this pumping regimen he  
14 estimated that the water levels in both the Leonard and Stockwell  
15 wells will have been lowered about 7-1/2 feet after one year and about  
16 9-1/2 feet after 9 years. Thus the pumping of well 4 under this  
17 regimen will not allow full recovery of the water level in either the  
18 Leonard or Stockwell wells, but in Grimstad's opinion the projected  
19 drawdown is not excessive in either well. It was also his opinion the  
20 Ock, Dotson, Endsley and the unused artesian wells should not be  
21 influenced by the operation of well 4.

## 22 VII

23 Robinson and Noble, Incorporated, consultants to respondent water  
24 district estimate that well 4 will theoretically achieve an ultimate  
25 drawdown of about 75 feet with pumping at the rate of 200 gpm for 8

1 hours per day. It was concluded by them that a 75 foot drawdown would  
2 be prevented in actual practice by the recharge which will take  
3 place. They also conclude that 75 foot drawdown in well 4 would not  
4 reduce the level in the Leonard well below a reasonably safe  
5 protection level of 80 feet below ground level. The evidence  
6 indicated that notwithstanding these computations by Robinson and  
7 Noble, Inc., the water district, at its own expense caused the pump  
8 intake in the Leonard well to be lowered. No evidence was presented  
9 to the Board indicating that any difficulty has been experienced in  
10 the Leonard well due to the past operation of well 4 at 100 gpm for 4  
11 hours per day.

#### 12 VIII

13 The Stockwell well is community well from which five homes derive  
14 their water for domestic purposes. The well does not produce enough  
15 water to adequately supply these homes. Mr. Stockwell, who had the  
16 well drilled, and who is now a co-owner along with the four other  
17 water users, believes that the low production of the well is due to  
18 the operation of well 4. The evidence however indicates that the  
19 well, even with no interference from well 4, can produce only about 3  
20 to 4 gpm on a sustained basis even though it is certificated for  
21 50 gpm.

22 There is no question, but that well 4, if pumped at the 200 gpm  
23 for 8 hours per day would substantially reduce the water level in the  
24 Stockwell well. David P. Garland, the professional geologist of the  
25 Department of Ecology who, as examiner, issued the Report of

1 Examination dated June 24, 1981, and who testified at the hearing,  
2 took this into consideration along with other information and  
3 recommended that the applied for appropriation be granted, but that  
4 the amount be reduced from 150 gpm to 50 gpm and that pumping be  
5 restricted to only 4 hours per day. He thus reduced the amount  
6 requested in the application by two thirds and reduced the pumping  
7 hours by one half. The total acre feet to be pumped from the well  
8 remains the same as before at 26.7 acre feet per year.

9 IX

10 Because aquifer test had previously been conducted by the  
11 Department of Ecology and by the respondents consultant Robinson and  
12 Noble, Inc., Mr. Garland as the examiner of DOE did not himself  
13 conduct any tests. In making his conclusions and recommendations he  
14 relied on the data which had already been accumulated, plus his own  
15 observations and discussions with interested persons. Mr. Garland  
16 found that a permit which limits the total appropriation from well 4  
17 to 100 gpm for a maximum of 4 hours per day and a total maximum of  
18 26.7 acre feet per year would meet the four-part criteria set forth in  
19 RCW 90.03.290 for the issuance of a permit.

20 X

21 The indications are strong that the low production rate of the  
22 Stockwell well is not caused by well 4, and that the lowered pump  
23 intake in the Leonard well will allow it to produce at a reasonable  
24 rate. The indications are also strong that the other wells in the  
25 area will not be adversely affected.

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XI

Any Conclusion of Law which should be deemed a Finding of Fact is hereby adopted as such.

From these Findings the Board enters these

CONCLUSIONS OF LAW

I

The four part criteria of RCW 90.03.290 for the issuance by DOE of a permit to appropriate public surface water, and made applicable to the appropriation of ground water by RCW 90.44.060, is:

1. Water is available for appropriation,
2. The appropriation is for a beneficial use,
3. The appropriation will not impair existing rights, and
4. The appropriation will not be detrimental to the public welfare.

II

The appellants, who had the burden of proof, failed to establish by the preponderance of the evidence that the appropriation approved by the Department of Ecology does not meet the four-part criteria for granting water right permits set forth in RCW 90.03.290. On the other side, DOE presented substantial evidence strongly indicating that the criteria had been met.

III

The testimony of Mr. Garland makes it clear that it is the intent of DOE to limit the total withdrawal from Well 4 under certificate No. G1-20328C and permit No. 22472 to a maximum of 26.7 acre feet per year and that the maximum rate of withdrawal under both the



1 certificate and the permit shall be 100 gpm for a maximum of 4 hours  
2 per day. The conclusions in the Report of Examination, although not  
3 too clear, appear to bear this out; however, the first recommendation  
4 is quite ambiguous and might be construed to mean that an additional  
5 26.7 acre feet are to be granted under permit No. G1-22472. The  
6 language in the permit itself, when issued, should clearly state that  
7 the maximum withdrawal under both the certificate and the permit is  
8 26.7 acre feet per year.

9 IV

10 The indications are strong that the operation of well 4, as  
11 provided by DOE's order authorizing a permit in accordance with the  
12 Report of Examination by David Garland, will not adversely affect the  
13 Stockwell and Leonard wells or any of the other wells in the area.  
14 Even so, it must be recognized that the nature of the aquifer is such  
15 that unforeseen problems may occur. This is suggested by the  
16 following statements set forth in the report of Robinson and Noble,  
17 Inc., consultants for the respondent water district, dated October 18,  
18 1973 (Exhibit R-10):

19 These figures support our earlier analysis that the  
20 aquifer is best near the Manchester Water District #4  
21 well and decreases in permeability at distance.  
22 Furthermore, there is severe confinement of the  
23 aquifer. This causes a large degree of interference  
24 between wells and suggests a channel-shaped aquifer.

25 . . . .

26 The exceedingly confined nature of the aquifer is not  
27 typical.

It is recognized that the figures which gave rise to the above

1 statements were based on pumping at the rate of 200 gpm for 8 hours  
2 per day; nevertheless these statements do indicate a need for DOE to  
3 be able to exercise continuing supervisory powers over the permit under  
4 the terms of the permit itself, instead of relying entirely on its  
5 statutory regulatory powers.

6 The need for continuing supervisory powers by DOE is further  
7 indicated by the water district's past record of failing to comply  
8 with the terms of its existing certificate on well 4, by the fact that  
9 the last study involving well 4 was in April of 1977, and by the fact  
10 that appropriating ground water, especially in this location, involves  
11 the application of an inexact science. We conclude therefore that the  
12 order of DOE directing issuance of a permit to the water district in  
13 accordance with the examiner's conclusions and recommendations as set  
14 forth in the Report of Examination should be modified by the addition  
15 of a provision to the permit which will allow DOE to require the  
16 permittee, in cooperation with DOE, to conduct studies to determine  
17 the effect of the operation of the subject well on neighboring wells,  
18 with the nature, methodology, duration and manner of reporting such  
19 studies to be specified from time to time by DOE. We also conclude  
20 that a provision should be added to the permit which will allow DOE,  
21 at its option, to require all or any part of the expenses of such  
22 study to be born by the permittee.

23 v

24 The order authorizing the issuance to Manchester Water District of  
25 a permit to appropriate ground water in accordance with the order by

DOE dated June 23, 1981, as modified by provisions consistent with  
Conclusions of Law III and IV, should be affirmed.

VI

Any Finding of Fact which should be deemed a Conclusion of Law is  
hereby adopted as such.

From these Conclusions the Board enters this

ORDER

1. The Department of Ecology decision to issue a permit under ground  
water application No. G1-22472 is remanded for the purpose of adding  
provisions consistent with Conclusions of Law III and IV.

2. In all other respects the Order is affirmed.

DONE this 5<sup>th</sup> day of February, 1982.

POLLUTION CONTROL HEARINGS BOARD

  
NAT W. WASHINGTON, Chairman

  
GAYLE ROTHROCK, Vice Chairman

  
DAVID AKANA, Member